UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

UNITED NATIONS CENTRE FOR HUMAN SETTLEMENTS (HABITAT)

# SECOND CONSULTATION ON THE WOOD AND WOOD PRODUCTS INDUSTRY

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## PREREQUISITES FOR THE INTEGRATED DEVELOPMENT OF THE SECONDARY WOOD-PROCESSING INDUSTRY*

Prepared by the
UNIDO Secretariat

*Mention of firm names and commercial products does not imply the endorsement of the United Nations Industrial Development Organization (UNIDO). This document has not been edited.

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Introduction

1. The secondary wood processing industry transforms primary products such as sawn timber, plywood, panels, etc., into finished products or their parts.

2. The world output of wood, cork and primary wood products is estimated to be 128 billion US dollars (1985). The share of developing countries in the world output is around 10% of this figure.

3. For the furniture industry alone, the world output is estimated at 84 billion US dollars (1985), of which less than 9% originated in the formal sector of developing countries.1/ It must be recognized, however, that the vast majority of developing countries' production is still in the informal sector.

4. Wood and wood manufactured products processing is a very important subsector in the world economy in terms of employment and value-added. It accounts for about 5 percent of the world's total manufacturing employment. In developed economies the value-added generated by the wood and wood processing subsector is assumed to be 4.2 percent of the total manufacturing value-added. In developing countries it is estimated at 3.7 percent.

5. As manpower is an important component in the structure of furniture manufacturing value-added, there are many opportunities to increase exports from developing countries. The share of Asian exports in 1987 accounted for 7% of total world exports and it continues to grow fast. Latin America, with an enormous potential, accounts for some 2% of world trade.

6. This paper summarizes the prerequisites discussed during the preparatory expert group meeting, for fast-growing development of the secondary wood-processing industries in developing countries.

Policy and strategy formulation

7. In most countries it is not uncommon that responsibility for the management of the whole wood sector is dispersed among various ministries and departments. As a consequence, policies for the development of the secondary wood-processing sector are often not co-ordinated with those concerning forest resources development and/or primary industries development and other industrial sectors.

8. Master plans could be useful tools to foster the establishment of intersectoral industrial relations leading to co-ordinated policies and strategies to develop the sector.2/

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1/ UNIDO Handbook of Industrial Statistics, (1988).

2/ DP/CMR/83/001 Cameroon - Assistance in the Formulation of an Industrial Master Plan.

9. In Malaysia the Industrial Master Plan (IMP), (1986) for the wood-based industry proposed a rationalisation of the primary processing industry in Peninsular Malaysia and the setting up of "timber processing zones" in Sabah and Sarawak. The establishment of "timber processing zones", which would cover sawmilling as well as further processing activities, is expected to facilitate the development of secondary processing in both these States.

10. The furniture and moulding sectors are targeted in the IMP to lead the growth in the wood-based industry. In the furniture sector, an average annual growth rate of furniture exports of 16.75% and 42.75% were targeted for the periods 1986-1990 and 1991-1995 respectively. In the case of moulding and joinery exports, the projected average annual growth rates are 8.90% and 22.45% respectively for 1986-1990 and 1991-1995. The relevant Government agencies are expected to work closely with the private sector in order to achieve the targeted growth.3/

11. As shown in Table 1, there was an annual growth of 38% in exports of furniture and joinery during the period 1986-1989.

Table 1

Exports of wood and wood products from Malaysia

Value: in '000 US dollar
Volume:in '000 $m^3$

| | 1986 | | 1987 | | 1988 | | 1989 | |
|---|---|---|---|---|---|---|---|---|
| | Volume | Value | Volume | Value | Volume | Value | Volume | Value |
| Logs | 18,995 | 1,055,528 | 22,853 | 1,569,652 | 20,571 | 1,485,836 | 21,100 | 1,613,161 |
| Sawn timber | 2,991 | 457,687 | 3,829 | 622,290 | 4,102 | 695,711 | 5,115 | 1,086,836 |
| Plywood* | 452 | 104,687 | 718 | 177,363 | 818 | 245,551 | 915 | 266,525 |
| Veneer | 405 | 28,679 | 492 | 38,105 | 210 | 44,056 | 248 | 54,123 |
| Mouldings | n.a | 86,046 | n.a | 116,536 | n.a | 151,880 | n.a | 192,387 |
| Furniture** | n.a | 10,210 | n.a | 20,906 | n.a | 34,761 | n.a | 63,438 |
| Joi. ry | n.a | 6,510 | n.a | 12,464 | n.a | 26,861 | n.a | 12,280 |

Figures are based on exchange rate
of 1 US$ = M $ 2.7

* Plywood includes blockboard and laminboard
** Furniture includes rattan furniture

Source: Malaysian Timber Industry Board (1990)

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3/ DP/MAL/79/001 Malaysia - Preparation of Medium and Long-term Industrial Master Plans.

12. Many of the timber-rich ASEAN nations have adopted policies and are now implementing programmes to attain faster development of their furniture and joinery industries.

13. Indonesia, for instance, has imposed prohibitively large export duties on sawn timber and is implementing programmes to develop primary and secondary transformation of wood. During the period 1980-87, exports of primary products (plywood) increased at an average annual rate of 56%, and the exports of furniture and joinery at an annual average rate of 86%. In 1987, the country exported raw rattan valued at US$ 230 million but changed the policies to stop exports of poles and encourage exports of furniture. Today, over 100 cane and rattan furniture factories are expanding and exports are increasing rapidly.

14. Taking into account the commitment of the member countries of the International Tropical Timber Organization (ITTO) to an environmentally-sound sustainable tropical forest management by the year 2000, integrated master plans should formulate policies and strategies to develop primary and secondary wood processing industries producing higher value-added products in order to use more efficiently the resources generated by environmentally managed natural or plantation forests in these countries. It must also be recognized that the management of tropical forests poses greater problems than temperate forests.

Technology

15. In industrialized as well as in developing countries, there is a need for continuous improvement and development of existing technologies as well as introduction of new technologies. In fact, this process may be accelerated due to the following reasons:

- As a result of the increased demand for wood, the supply of timber is changing. The most well-known tropical species are becoming scarce. New species hitherto commercially unknown or regarded as less suitable are entering the market. It will be necessary to introduce and adapt technologies to suit the physical characteristics of these new species or even to develop new ones.

- Demands for an environmentally sustained timber supply are growing and, undoubtedly, the cost of the new forest management programmes will increase the price of logs in the tropics. To cope with this trend, the secondary wood-processing industry will have to use increasingly sophisticated technologies to improve yields in its use of expensive raw material. More elaborate construction methods may also be necessary.

- Environmental problems may also lead to a ban on well-known preservatives and formaldehyde resins and their replacement by new, more environmentally-friendly chemicals. New technologies may also be required for their application. In addition, a more elaborate structural design of wood products will be required to increase their built-in protection.

- The increased cost of raw material may be partially offset by productivity gains in the manufacturing industry. For instance, wood furniture is in quality/price equilibrium with respect to plastic or metal furniture. If the price of the former rose extensively, the latter could substantially increase its share of the market.

- To remain competitive, the secondary wood processing industry will need to introduce new technologies as has been done by other assembling industries. These technologies should be introduced not only in production equipment but also in the management of production and in the design of products.

- The existence of these new technologies, many of them already in use in developed countries and some now emerging, poses a special problem for developing countries namely: the assessment of their transferability and eventual suitability. Industrial research, development and training centres located in developing countries could play an important role in this process of assessment, transfer and introduction of new technologies.

Human resources

16. Training of key personnel in wood manufacturing enterprises, especially those in developing countries, is needed in, among others, the following areas:

- All aspects of general, financial, personnel and marketing management with special emphasis on the management of small and medium-scale industries
- Cost evaluation systems
- Product development for serial production
- Production technology including equipment selection, plant layout, etc.
- Production management as applied to serial production
- Use and maintenance of plant machinery and tools
- Identification of species and grading of timber and panels
- Special techniques for processing CLAS
- Wood drying
- Wood preservation
- Integrated quality control systems and procedures for serial production
- Occupational health and safety
- Environmentally safe production processes, waste extraction and disposal
- Packaging, including design of packages and selection of packing materials.

17. In today's economies, industries have to be flexible enough to react quickly to changes in technology, consumer tastes, markets, etc. Obviously, this implies a continuous change in skill requirements. It is evident that it is the industry itself that is in the best position to assess its present requirements. It is certainly difficult to forecast future needs, and assistance from technologists, management consultants, marketing specialists, scientists, etc. outside the industry could be necessary.

18. Combined efforts by public and private institutions as well as on-the-job training by industry and equipment suppliers could reasonably fulfil training requirements, provided these institutions are flexible enough to adapt to continuous changes.

19. Paid on-the-job training could be improved to permit employers to get an adequate return on their investment - trainees often leave after the training period - and trainees to have their rights protected. On the other hand, government training institutions, study tours, etc., could be partially financed by the end users through a tax system calculated on the wages the industry pays. Industry should be adequately represented in the management board of training institutions to ensure that the training programmes reflect the industry's real needs and priorities. For instance, in some Asian countries the establishment of product development and design centres has made consultancy services in furniture design and product development available to the small and medium-scale enterprises which they would otherwise not be financially capable to afford.

20. Different forms of nurturing new small-scale industries like "business incubators", already increasingly popular in developed countries, could and should be promoted in developing countries.

Standards and quality control

21. The importance of standards and quality control in manufactured wood products cannot be underestimated. Unlike the case for primary products - for which standards have been accepted long ago - quality is built into a manufactured wood product. This calls for an appropriate technology and a trained and conscientious work force.

22. In the case of furniture components, mouldings and similar products, the standards used in the trade are those of the receiver. Although standards exist for furniture, they are seldom specified, except in contract work; and appearance and the supplier's reputation play a relatively important role. One way of enhancing producers' reputations would be the provision of national standards, and an impartial and serious testing and inspection system, leading to a "quality label".

23. The problems related to joinery and structural timber elements are more difficult to overcome, because non-tariff barriers play a bigger role. In countries where timber is accepted in construction the species used are temperate zone softwoods. The standards and prevailing practices of these countries tend to be limiting and do not permit full credit for the additional strength of tropical hardwood. This tends to limit their use in construction. "Deemed to satisfy standards" could overcome this. UNIDO has been instrumental in the creation of CIB Working Group W18B ("Tropical and Hardwood Timber Strength") to allow the interests of the countries producing tropical hardwoods to be aired and taken into account. The standards used are invariably those of the end-user country, and it will be necessary to train product designers familiar with their requirements prior to even envisaging entering these markets. Needless to say, greater use of local timbers in producing countries would inspire confidence in prospective importers. To achieve this, efforts should be made to develop appropriate timber engineering design codes and related standards to promote such structural uses.

Transport

24. The secondary wood processing industry uses processed primary wood products and occasionally logs as raw material imputs for further processing. All of these raw materials come from forests and/or plantations and the cost of transporting them to the intermediate or final users has an effect on the cost of the final products.

25. UNIDO has carried out a background study on maritime transport in order to assess the magnitude of inland and maritime transport costs of logs and primary products, which in Europe is as high as 70% of the CIF price for timber shipped from West Africa. The study, which compares the situation in the main wood-producing sub-regions, namely West Africa and South East Asia, constitutes part of the background documentation for the Consultation.4/

26. For export markets, furniture is usually shipped in containers. This system has increased the safety of shipments and reduced the risk of damage. Good packaging practices are necessary in order to avoid the common hazards encountered in shipping furniture and can also be useful marketing tools. In the case of knock-down furniture, it is customary, in designing components and their packages, to minimize wasted space in the container.

27. Single or multilayer corrugated boards that can provide protection against impact, compression and chipping, are increasingly being produced in developing countries. Polyethylene film, that can provide some protection against atmospheric dangers, is also common. Nevertheless, new technologies such as co-extruded plastic films, could be adapted specially for knock-down furniture that has to be shipped and later reassembled in another physical environment.

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4/ Study on Maritime Transport of Wood and Wood Products, ID/WG.506/2(SPEC.), 1990.

28. Many post-sales problems could be avoided with the use of appropriate packaging materials and techniques. Knowledge thereof is vital for exporting countries.

Finance and investment

29. There are still considerable possibilities to make the financing system more effective, transparent and accessible. The problem is often not that of a shortage of funds but the loan and credit conditions that are requested.

30. One bottleneck may be the lack of interest and/or discouragement of potential investors. Steps that would generate more interest in investment include:

- Faster and more transparent evaluation of investment projects by government agencies, banks and other concerned organizations.

- Removal of an excessive number of policies and regulations that are often contradictory. "One stop" offices that grant pioneer status have been a great help.

- Revised investment codes including unambiguous rules and procedures to repatriate foreign investors' profits.

- Availability of qualified manpower at all levels.

- Flexibility in contractual arrangements with labour.

- Government investment in infrastructure, transport and communications.

- Favourable investment climate in terms of social and political stability to reduce investment risks.

31. Many countries seek to increase both employment and the value-added of wood products domestically by encouraging processing rather than the exporting of logs. Export quotas as well as excessive import duties may, however, create inefficient local industries.

32. It is also worth mentioning that distorted incentives may reduce the efficiency of wood processing industries.

33. In many aspects, sustainable forest management is a special case and some incentives could be socially and environmentally justified. The justification for incentives comes from the fact that sustainable forest management provides a public service in terms of wildlife preservation, genetic diversity, etc., as well as in preservation of the resources that are socially useful goods but difficult for the time being, to include in the cost of the timber.

34. Some agencies, in their bid to encourage private participation in the development of wood and wood products industries, have agreed to grant input subsidies on the following:

- Production inputs
- Equipment and facilities
- Extension services
- Tax relief to manufacturing enterprises which grow their own raw materials
- Removal or reduction of import duties on material and equipment required for wood processing
- Establishment of credit schemes
- Spare parts
- Introduction and enforcement of timber grading rules coupled with the maintenance of appropriate production standards to ensure that end users of intermediate wood products obtain the correct quality of raw material
- Suppression of remaining export duties on processed wood products and on rough wood of certain species provided that an adequate reforestation programme be implemented effectively.

Trade and markets

35. Since the mid-1980's there has been a strong growth in the value of OECD trade on furniture and parts thereof.

Table 2

OECD: apparent growth of imports of wood furniture and parts thereof
(SITC 821)
(in millions of United States dollars)

| | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|
| **Total imports of furniture (current prices)** | **8,429.1** | **9,361.0** | **10,609.6** | **14,384.9** | **18,375.8** |
| Average inflation index (1983=100) | 100.0 | 105.2 | 109.9 | 112.8 | 116.4 |
| Imports (at constant 1983 prices) | 8,429.1 | 8,898.2 | 9,653.9 | 12,752.6 | 15,786.8 |
| Annual growth rate (%) | | +5.6 | +8.5 | +32.1 | +23.8 |
| Overall growth, 1983-1987 (%) | | | | | 87.3 |
| Imports from developing market economies | | | | | |
| Imports at current prices | 1,114.9 | 1,399.3 | 1,661.4 | 2,202.5 | 2,990.4 |
| Imports at constant 1983 prices | 1,114.9 | 1,330.1 | 1,511.7 | 1,968.3 | 2,569.1 |
| Annual growth rate (%) | | +19.3 | +13.7 | +30.2 | +30.5 |
| Overall growth, 1983-1987 (%) | | | | | 130.4 |

Source: UNSO/ITC Comtrade Data Base System.

36. One important fact emerging from these statistics is that while OECD imports from all countries increased by 87%, their imports from developing countries was up by 130 percent. Therefore, developing countries are increasing their share of total exports to the major economies.

Table 3

Share of developing countries in OECD imports of wood furniture
(SITC 821)
(in millions of United States dollars)

| | Total imports | | of which from developing countries | | Share of developing countries in total imports (%) | |
|---|---|---|---|---|---|---|
| Country/Area | 1983 | 1987 | 1983 | 1987 | 1983 | 1987 |
| European Community | 4496 | 9081 | 117 | 264 | 2.6 | 2.9 |
| USA | 2044 | 5057 | 756 | 2144 | 36.9 | 42.4 |
| Other major OECD countries | 1872 | 4189 | 242 | 583 | 12.9 | 13.9 |
| Total OECD | 8429 | 18376 | 1115 | 2991 | 13.2 | 16.3 |

**Source:** UNSO/ITC Comtrade Data Base System.

37. The generally low level of restrictive measures in major importing countries such as the EEC, which allows almost duty-free entry from all sources, or the USA where tariff rates are free for the GSP beneficiaries, does not explain the increase in the developing countries' share in the USA market and the stagnation, in relative terms, in the EEC markets.

38. This fact suggests that the bottleneck hindering the expansion of exports from developing countries to some OECD markets is not a problem of access but rather relates to aspects of production such as cost efficiency, serial mass production, quality standards, quality control and very important aspects of marketing such as product design, distribution channels, etc.

39. Nevertheless, internal barriers that may apply equally to local producers as well as exporters, exist in the majority of developed and developing countries.

40. When it comes to the promotion of wood utilization as a building material and its marketing, one major constraint appears to be the attitude of the consumer and the threat of substitute products - an important competitive force acting upon all wood products. Negative perceptions of all such products exist in terms of maintenance and weather resistance.

41. A recent study by the American Plywood Association on the effects of the Californian earthquake of 17 October 1989 showed that wood-frame construction built to meet current code provisions performed very well. Besides noting the ability of wood-frame buildings to resist shaking the study pointed out that none of the newer wood-frame buildings, which met the 1973 Uniform Building Code's earthquake provisions, seemed to be damaged. In contrast, masonry buildings, especially those unreinforced, performed poorly due to greater weight and brittleness.

42. In spite of this, a set of legislative barriers as well as increased mortgage rates, higher insurance rates, etc., penalize the use of wood as a building material thereby eroding its competitiveness.

43. On the other hand, in a move initiated by the Republic of Korea and supported by members of the Association of South East Asian Nations (ASEAN), selected tropical products including wood have been proposed for a round of tariff reductions in the current Uruguay Round of Negotiations of the General Agreement of Tariffs and Trade (GATT). This, if agreed upon, would eliminate all import duties on unprocessed tropical wood and eliminate or substantially reduce duties on semi-processed or processed products. Non-tariff measures affecting trade would also be eliminated.

Environmental awareness

44. The Brandt Report "North-South: A programme for survival", published in 1980, mentioned the urgent need for reforestation in developing countries, yet its repeated appeals for greater political recognition of the crisis facing millions of people were ignored. Tropical forests are disappearing at the rate of tens of thousands of square miles a year. A recent study has estimated that the rate of deforestation for closed tropical forests has almost doubled in the last 10 years. The estimate of deforestation for closed forests alone is about 14 million ha per year and if the same rate of increase applies to open forests, total deforestation would be about 22 million ha per year.5/

45. FAO estimates that the annual rate of tropical deforestation is now about 80 percent higher than it was 10 years ago and amounts to 17 million hectares per year.

46. Among the main agents of deforestation are the conversion of forested areas to shifting cultivation, cattle ranching, modern agriculture, the use of wood as combustible, and wasteful commercial logging operations.

47. A sense of crisis is emerging in developing countries as governments recognize that the rapid deforestation represents a waste of valuable resources and severe economic losses. In some cases governments have taken action by banning or suspending logging in certain sensitive areas.

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5/ Myers, N., Deforestation Rates in Tropical Forests and their Climatic Implications, Friends of the Earth, London, 1989.

48. In some developed countries, private firms are logging and reforesting. Generally speaking, however, it cannot be expected that private firms reforest on public land either in developed or developing countries except where the right to harvest also stipulates the responsibility to replant. In many tropical areas this system has not produced the expected results due to the high rate of failures in replanted trees and the difficulty in having effective control over reforestation operations.

49. For these reasons, the concept of sustained yield forest management, which implies limited harvesting of two or three trees per hectare and a subsequent period of regeneration (15-20 years) until the next logging, has gained recognition and formal acceptance.

50. Very few tropical forests are currently being managed for sustained productivity but there is a commitment from ITTO countries to do so by the year 2000.

51. As developed countries now realize that it is also in their interest to preserve tropical rainforests, it is expected that co-operative efforts will improve.

52. A number of governments are now strengthening their forest management capability with the help of international organizations. The World Bank and the Asian Development Bank have loans in the pipeline for forest-management improvement in a dozen countries. Most of these loans support forest-policy reform as well as institutional strengthening.

53. International interest in tropical forests has bloomed, accompanied for the first time by a willingness to contribute to their maintenance. However, many problems remain unsolved. Among these is the question of how much can be absorbed by timber for costs of sustainable forest management without loss of competitivity against other materials.

54. Another important question is who will have control over logging operations in the sustainable managed tropical forest. Taking into consideration the increased influence of environmental groups among the consumers, the question of the credibility of tropical forest management is a pertinent one.

55. Preservation of natural forest and development of secondary processing industries are not contradictory objectives. In fact, all available data suggest that it is possible to increase manufactured wood products output, preserving the resources and the environment, if appropriate measures are taken urgently. The objective of this Consultation is to agree with these measures and with their implementation.

Major questions to be discussed

(a) Policy and strategy

56. In view of the widespread concern about deforestation, it has to be envisaged that within the next few years adjustments will be made to limit log output. Government interventions may be necessary to channel the flow of primary products from export to the local secondary processing industry in order to get more efficient utilization of resources in terms of value-added.

57. Accordingly, the viability of the wood industry in developing countries rests on the skill to produce and export value-added products, ensuring the sustainability of resources and the vitality of the primary processing industry.

Questions:

(i) Which policy, based on the experience of some countries which shifted from export of logs to export of further processed products, can be described as successful and what incentives, direct or indirect, financial and non-financial, were utilized?

(ii) What would be the best mechanisms to disseminate information on the success and failures of policies for developing primary and secondary wood processing industries?

(iii) What investments in infrastructure would be necessary?

(b) Technology

58. The secondary wood-processing industry in developing countries is characterized by small- and medium-scale enterprises where lack of specialisation as well as the country's own technology, results in low productivity, poor product quality and inefficiency in raw material utilization. These are vital for production in series for export markets.

59. There is also an urgent need to define or adapt standards for internal and external markets.

Questions:

(i) What level of technology would be most appropriate for the various conditions prevailing in developing countries and how should it be determined?

(ii) How can the above technology be acquired?

60. To increase raw material availability it is not sufficient to rely on existing, known wood resources. A more efficient use of small dimensions and residue utilization is necessary as well as promotion of commercially-less accepted species (CLAS).

Questions:

(i) How can the use of CLAS for secondary wood processing be promoted and through which measures at the level of:

- state and para-state bodies
- foresters
- manufacturers
- specifiers
- technologists
- consumers
- commercial operators?

(ii) Are imported designs and/or production under licence possible and suitable alternatives?

(iii) How can standards for internal and external markets be developed and/or adapted?

(iv) Are research and development institutes a good solution to acquire and diffuse the latest technological developments? Should they include design centres?

(c) Human resources

61. Training needs in developing countries are immense not only in wood manufacturing but also in all aspects of management, marketing and design.

Questions:

(i) What kind of mixture of public and private formal training institutions as well as on-the-job training should be developed and how?

(ii) How should these institutions be financed and what should the respective role of the public and private sector be?

(iii) What form of design education would be the most suitable?

(iv) What type of collaboration in training could be developed between developed and developing countries?

(d) Standards and quality control

62. The importance of standards and quality control cannot be underestimated by either exporters or importers.

Questions:

(i) What role, if any, would a "quality label" for furniture produced in a developing country play in helping to introduce it in developed markets?

(ii) What measures should be taken to increase the acceptability of timber engineered products made from tropical hardwoods in both developing and developed countries?

(e) Transport

63. Transport is a relatively important component in the cost of wood as well as secondary processed products.

Questions:

(i) How can the cost of surface and maritime transport be reduced?

(ii) Are developing countries using effective packaging technologies to minimize damage and lower transport costs? How can these techniques be disseminated?

(f) Finance

64. Local banks and development institutions are generally a valuable source of information.

65. As far as the knowledge of financing sources is concerned, a list of international financial institutions is available. It refers to development banks and provides information on eligibility criteria and financing available.6/ Local sources, mainly development institutions, are usually easy to reach and have a good knowledge of a country's economy.

66. Collateral, such as real estate, assets or personal surety, will be requested in all cases to cover unexpected risks and to facilitate recovery of the credit. Besides, preparation of feasibility studies is essential to attract investments.

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6/ UNIDO Industrial Technology Promotion Division, Manual on Technology Transfer Negotiations, Chapter V.7. - Annex.

Questions:

(i) Would it be possible to simplify financial mechanisms?

(ii) How can capabilities of developing countries in this area be improved?

(iii) How can the problem of excessive guaranties be resolved?

(g) Trade and markets

67. As the access to external markets shows a tendency towards the elimination of most of the restrictive measures, efforts could be concentrated on a better knowledge of these markets and on the elimination of other internal barriers especially those that hinder the development of wood as a building material.

Questions:

(i) How can the overall knowledge of potential markets be increased?

(ii) What should be undertaken to ensure that wood is allowed to play its role as a building material by modifying standards, fire regulations, insurance premiums, etc.?

(iii) What promotion campaigns should be carried out and by whom to educate the public on the role of timber in construction?

Annex

UNIDO financing sources for investment and technology transfer, 1989

MULTINATIONAL INSTITUTIONS

International Development Banks

DEVELOPING COUNTRIES

INTERNATIONAL FINANCE CORPORATION (IFC)

1818 H Street N.W.,
Washington D.C. 20433
U.S.A.

Telephone: (202)477-1234-86-200
Telex: ITT 440098
RCA 248423
Cable: CORINTFIN

Shareholders: The IFC is an affiliate of the World Bank (138 member countries)

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1. ELIGIBILITY CRITERIA

| | |
|---|---|
| Geographical coverage | All developing member countries. |
| Sector/sub-sector coverage | High priority is given to productive private enterprises, but IFC is ready to support mixed enterprises. Main sectors of intervention are manufacturing, mining, tourism, utilities and agro-industry. |
| Project sponsor | IFC attaches great importance to the extent of sponsor's participation in share capital. |
| Other | Government agreement is always required. |

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2. FINANCING AVAILABLE

| | |
|---|---|
| Equity | Minority participation.<br>Preferably less than 25% of share capital.<br>Sale of its investments to private investors, if possible local, whenever can be done on satisfactory terms. |
| Loans | Currencies: usually USD but may be in other major convertible currencies.<br>Interest rates: vary according to circumstances risk entailed and prospective return. Generally floating, tied to LIBOR plus spread and front end participation fee.<br>Maturity: 7 to 12 years |

IFC (continued)

Collateral: usually, government guarantee is not required.

Limits: IFC generally provides a maximum of 25% of project cost. Provides normally between USD 1 million and USD 50 million. Can raise funds from other sources. May invest less than USD 1 million in Less Developed Countries.

Commitment fees: usually 1% per annum on undisbursed portion of the loan.

3. COMMENTS

- Not tied to purchase of specific equipment from a specific country.
- IFC always co-finances project.

MULTINATIONAL INSTITUTIONS

International Development Banks

EUROPE & ACP

EUROPEAN INVESTMENT BANK (EIB)

100 Bd. Konrad Adenauer,
L - 2950 Luxembourg

Telephone: 4379-1
Telex: 3530
Telefax: 43.77.04
Cable: BANKEU

Shareholders: EEC member countries

1. ELIGIBILITY CRITERIA

| | |
|---|---|
| Geographical coverage | EEC, ACP States and Mediterranean countries |
| Sector/sub-sector coverage | For ACP States: public and private sector. Priority is given to productive projects in industry, agro-industry, agriculture, mining, energy, tourism, transport and telecommunications. |
| Industrial partner | International tender for supply of investment items, at least to EEC member countries and ACP States. |
| Other | Formal agreement of host country's authorities is required. |

2. FINANCING AVAILABLE

| | |
|---|---|
| Risk capital | - Minority equity participations of a temporary nature in enterprises and development banks.<br>- Quasi-capital in the form of subordinate loans (repayable after other bank debts) and conditional loans (linked to fulfilment of certain conditions):<br>- loans to promoters, ACP States and development banks to acquire shareholding in an ACP undertaking.<br>Depending on nature of each project quasi-capital assistance is generally concessionary (often 2% with term of 25 years). Repayments in equal annual instalments. Denominated in ECU but disbursed in EEC currencies. Endorsement of host country's government is required. |
| Loans | Currency: Loans denominated in ECUs, disbursed in various currencies according to borrower's preferences and Bank's holdings.<br>Loans from EIB's own resources are provided for projects likely to offer an adequate economic return. |

EIB (continued)

| | |
|---|---|
| | Interest rates: market rates. For ACP countries, except for projects in the oil sector, rate is automatically reduced by a 3% interest rate subsidy, financed from European Development Fund resources, which will be adjusted where necessary so that interest rate actually borne by borrower is between 5% and 8%.<br><br>Maturity: variable, depending on project. Grace period fixed by reference to construction period and funds needed. For industrial projects: 10 to 12 years. For infrastructure projects: 15 to 20 years.<br><br>Repayments: equal semi-annual instalments.<br><br>Collateral: guarantee of the State is generally required although other first-class guarantees may be considered.<br><br>Commitment fee: 1% |
| Lines of credit | To regional banks and institutions for onlending to projects. |
| Investment limits | Not exceeding 50% of total investment cost. Minimum scale of project: no definite rule, but if project is considered too small, it may be able to benefit under a global loan by EIB to an ACP State or a national/regional development bank. There are no specific country floor or ceilings, only a total EIB lending limit which, for Lome III, amounts to ECU 1,100 million. Risk capital limit amounts to ECU 600 million. |
| 3. NON-FINANCIAL SERVICES | Risk capital assistance may be used for financing of specific project preparation and development studies. The loan becomes a grant if the study results are negative. |
| 4. COMMENTS | Funds not tied, not related to purchase of equipment in specific countries. No technical assistance provided by the Bank, but financing of assistance in specific projects. EIB monitors implementation of operations financed. |

MULTINATIONAL INSTITUTIONS

REGIONAL DEVELOPMENT BANKS

AFRICA

AFRICAN DEVELOPMENT BANK (AfDB)
01 P.O. Box 1387,
Abidjan 01,
Cote d'Ivoire

Telephone: 32 07 11/32 50 10
Telex: 23717/23263
Cable: AFDEV

Shareholders: 50 independant African States and 22 non-regional members

1. ELIGIBILITY CRITERIA

| | |
|---|---|
| Geographical coverage | All African shareholding countries. |
| Sector/sub-sector coverage | Both private and public sectors. Not rigidly linked to any specific economic or social sector, but priorities: agriculture, transport, public utilities, industry, mining. |
| Other | Host government agreement is required in all cases. |

2. FINANCING AVAILABLE

Equity

Minority participation in banks or other financing institutions.

Loans

Currency: Amount expressed in Units of Account, Principal and interests of loans repayable in the currency(ies) disbursed by the Bank.

- Loans for specific projects or group of projects, particularly those forming part of a national or regional development programme.

Interest rates: fixed for the term of the loan.

Maturity: 12 to 20 years: grace period of up to 5 years.

Collateral: guarantee of government for all projects.

Statutory commission: 1% minimum

Commitment fee: 1% on undisbursed portion of signed loans.

ARAB BANK FOR ECONOMIC DEVELOPMENT IN AFRICA (BADEA)

P.O. Box 2640,
Khartoum,
Sudan

Telephone:
73647/73709/70495
Telefax: 22248/22739
Cable: BADEA

Shareholders: Member States of the League of Arab States

1. ELIGIBILITY CRITERIA

| | |
|---|---|
| Geographical coverage | Non-Arab member countries of the Organization of African Unity (OAU) - only countries which have not recognized Israel. |
| Sector/sub-sector coverage | Infrastructure, agriculture, industry, energy. Priority to projects allowing to develop Arab investment in Africa. Preference to medium size projects (USD 4 to 5 million) and to regional projects. |
| Industrial partner | Assistance is not tied to supply of equipment from specific country. Usually international bid in African and Arab countries. |
| Other | Government agreement is required.<br>Project must be part of countries' development plans.<br>Project must be presented by respective government. |

2. FINANCING AVAILABLE

| | |
|---|---|
| Equity | No |
| Loans | Currency: mainly USD<br>- Loans to specific development projects<br>Interest rates:<br>• for agriculture and poorer countries: 2%<br>• other, depending on country and project 4 to 7% |

BADEA (continued)

| | |
|---|---|
| | - Loans to development financing institutions<br>Interest rate: up to 8%<br>Maturity: 10 to 25 years (average 15), with 3 to 5 years grace<br>Collateral: Government guarantee required |
| Investment limits | Maximum USD 10 million or 40% of total cost of project. |
| Other | BADEA can give its guarantee to Arab and African institutions for the obtention of supplementary credits. |
| 3. NON-FINANCIAL SERVICES | Financing available for pre-investment studies as a grant which will be included in the loan if the project is carried out. |

MULTINATIONAL INSTITUTIONS

Regional Development Banks

CENTRAL AFRICA

BANQUE DE DEVELOPPEMENT DES ETATS DE L'AFRIQUE (BDEAC)

P.O. Box 1177,
Brazzaville,
Republique Populaire du Congo

Telephone: 81 02 12
Telex: 5306

Shareholders: Cameroon, Congo, Central African Republic, Gabon, Chad, Equatorial Guinea, Banque des Etats de l'Afrique Centrale, France, Kuwait, Federal Republic of Germany, African Development Bank.

---

1. ELIGIBILITY CRITERIA

| | |
|---|---|
| Geographical coverage | All African shareholding countries |
| Sector/sub-sector coverage | Priority to economic integration projects. infrastructure, agriculture, productive sectors. |
| Project sponsor | Borrower must have secured at least 20% of project's total financing requirements (25% for industrial projects). |

---

2. FINANCING AVAILABLE

Equity: Minority participation.
Sale of participation to State or nationals in due time.

Loans: Various currencies. Foreign exchange risk is to be taken by borrower.

Interest rates: depending on sectors.

- Rural development and basic infrastructure: 5.5 to 8%
- Viable infrastructure projects: 7.5 to 11%
- Productive and profitable projects: 8.5 to 12%

Maturity:

Medium-term: 3 to 10 years with a grace period of max. 3 years:

Long-term: 11 to 20 years, with a grace period of max. 7 years:

Short-term: not available

BDEAC (continued)

| | | |
|---|---|---|
| | | Collateral: guarantee of government or of national finance institution.<br><br>Commitment fee: 0.75% on undisbursed portion of signed loans. |
| | Investment limits | Minimum: FCFA 100 million (Bank's own commitment)<br>Maxmimum: total investment not to exceed 10% of the Bank's ordinary resources.<br>Specific project: not to exceed 75% of total cost.<br><br>Equity: not to exceed 10% of authorized capital: total equity participation not to exceed 10% of shareholders' funds |
| | Guarantees | For projects totalling less than FCFA 50 million, the Bank can give its guarantee to local development institutions. |
| | Other | Lines of credit to local financial institutions to be on-lent to projects<br>Interest rates: 5.5 to 8.5% |
| 3. | COMMENTS | - Co-financing with national finance institutions.<br><br>- For private companies, financing request has to be submitted by or via respective government. The Bank can finance small and medium size projects only by lending through local development institutions. |

MULTINATIONAL INSTITUTIONS

Regional Development Banks

WEST AFRICA

BANQUE OUEST AFRICAINE DE DEVELOPPEMENT (BOAD)

68 avenue de la liberation,
P.O. Box 1172,
Lome, Togo

Telephone: 21 59 06
21 42 44

Telex: 5289/5336

Shareholders: Banque Centrale des Etats de l'Afrique de l'Ouest (BCEAO), Benin, Burkina Faso, Cote d'Ivoire, Mali, Niger, Senegal, Togo, France, FRG, European Investment Bank

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1. ELIGIBILITY CRITERIA

| | |
|---|---|
| Geographical coverage | African shareholding States |
| Sector/sub-sector coverage | Priority to rural sector, basic infrastructure, industry.<br>Favours projects of common interest to two countries or more.<br>Public and private sectors |
| Project sponsor | Financial participation of sponsor is required. |

---

2. FINANCING AVAILABLE

| | |
|---|---|
| Equity | Maximum 5% of the Bank's shareholders' funds.<br>Per project, investment not to exceed 25% of capital. |
| Loans | Currency: FCFA<br>Interest rates: 6.25 to 12% p.a.<br>Maturity: 7 to 15 years, with 1 to 7 years grace<br>Collateral: guarantee of government or acceptable finance institution.<br>Guarantee commission: 1%<br>Commitment fee: 0.50% on undisbursed portion of signed loans |

BOAD (continued)

| | | |
|---|---|---|
| | Lines of credit | To local finance institutions to be on-lent to projects |
| | Investment limits | Maximum: 10% of Bank's own funds<br>Minimum: FCFA 20 million<br>In general max. investment:<br>- 50% of project cost for industry<br>- 80% for infrastructure & rural development |
| 3. | NON-FINANCIAL SERVICES | Financing available to pre-investment studies and preparation of project. If project is realized, cost of study incorprated in amount ofloan granted by BOAD.<br>Technical assistance (co-operation with international organizations such as UNDP, FAO, Afdb etc.) |
| 4. | COMMENTS | - Co-financing with other finance institutions<br>- Assistance not tied to supply of equipment from specific country |

MULTINATIONAL INSTITUTIONS

REGIONAL DEVELOPMENT BANKS

EAST AFRICA

## EAST AFRICAN DEVELOPMENT BANK (EADB)

4, Nile Avenue,
P.O Box 7128,
Kampala,
Uganda

Telephone: 23 00 21
Telex: 61.074
Cable: EADEV

Shareholders: Kenya, Tanzania, Uganda, African Development Bank, Barclays Bank PLC, Commercial Bank of Africa, consortium of Yougoslav institutions, Grindlays Bank, Standard Chartered Bank PLC, PK Banken (Stockholm)

---

1. ELIGIBILITY CRITERIA

| | |
|---|---|
| Geographical coverage | Kenya, Tanzania, Uganda |
| Sector/sub-sector coverage | Preference of regional projects |
| Other | Respective central Bank's approval is required |

---

2. FINANCING AVAILABLE

| | |
|---|---|
| Equity | Not to exceed 10% of shareholders funds |
| Loans | Currency: loans in local currency permitted, but loans are usually provided in foreign currency. Borrower bears foreign exchange risk.<br><br>Interest rates:<br><br>Maturity: 8 years |
| Lines of credit | To local finance institutions to be on-lent to projects. |
| Investment limits | EADB cannot finance more than 50% of the net assets of any single company and cannot commit more than 15% of its net worth to any single company. |

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3. COMMENTS

Co-financing with other finance institutions

SOCIETE BELGE D'INVESTISSEMENT INTERNATIONL (SBI)

63, rue Montoyer,
B - 1040 Bruxelles

Telephone: (02) 230 27 85
Telex: 25 744 snim
Telefax: (02) 230 87 84

Shareholders - Public sector: 67%
- Private minority interest: 33%

---

1. ELIGIBILITY CRITERIA

| | |
|---|---|
| Geographical coverage | All countries (industrialized and developing) |
| Sector/sub-sector coverage | Industry, agriculture, agro-industry, mining and services(commercial, technical, transport etc.) |
| Industrial partner | Belgian or foreign, Industrial partners are expected to share in the project risk and provide management. |

---

2. FINANCING AVAILABLE

| | |
|---|---|
| Equity | Minority shareholdings with specific agreements insuring sale of equity holdings after reasonable period of time. |
| Loans (convertible) | Currency: usually Belgina Francs or other currencies available on international markets.<br>Maturity: 5 to 10 years (grace: 2-4 years)<br>Repayment: schedule based on cash flow forecasts<br>Rates: - Belgian Franc denomirated loans: fixed market rate (revised every fifth year)<br>- other denominations: fixed or floating market rates<br>- political and transfer risk premium: 1%<br>- interest rates on convertible loans or bonds may be reduced by 0.25% to 1%.<br>Collateral: appraised on a case by case basis.<br>Commitment fee: average: 0.75% |

SBI (continued)

| | | |
|---|---|---|
| | Mixed financing | Equity participation and loans |
| | Investment limits | Total SBI investment in any project:<br>- minimum: FB 10 million<br>- maximum: FB 60 million (i.e. 5%of SBI's share capital) |
| | Other | - Indirect financing: loans to (usually Belgian) investors to finance their equity participation in a foreign venture.<br>- extension of guarantees<br>- Leasing or lease-back operations |
| 3. | NON-FINANCIAL SERVICES | - Partner and project idenfication<br>- Co-operation agreements with foreign development finance institutions.<br>- Information and advisory services available to small-and-mediur-scale enterprises. |
| 4. | COMMENTS | SBI gives preference to projects using Belgian equipment, technology or know-how, or providing inputs useful to the Belgian industry. |

## THE INDUSTRIALIZATION FUND FOR DEVELOPING COUNTRIES (IFU)

Bremerholm 4, DK - 1069
Copenhagen K
P.O. Box 2155, DK - 1016
Copenhagen K

Telephone: (1) 14 25 75
Telefax: (1) 32 25 24
Telex: 15 493
Cable: INVESTFUND

Statute: Fund Capital derives from the Danish government

---

### 1. ELIGIBILITY CRITERIA

**Geographical coverage**

Independent developing countries in Africa, Asia and Latin America with GNPs per capita of maximum USD 3,000 per year.

**Sector/sub-sector coverage**

- Agriculture, food and drinks
- Chemical products
- Metal industries and engineering
- Consulting organisations and services
- Stone and building industries
- Wood, furniture and textiles
- Paper and paper products

**Industrial partner**

Danish technical partner and investor

---

### 2. FINANCING AVAILABLE

**Equity**

Not to exceed 30% of total share capital, not to exceed the Danish partners' holding.

Termination of participation: when project has reached a certain financial stability (after 8-10 years). IFU shares are offered for sale (joint venture partners are given right of first refusal).

**Loans**

Currency: Danish Krone (DKK)

Interest rates: related to official Danish discount rate. Fixed for the whole maturity period on the date of approval of the loan.

Maturity: 8 to 10 years with a grace period of up to 4 years.

Repayment: equal semi-annual instalments

**Investment limits**

Not to exceed 35% of total investment, nor participation of Danish partner.

**Guarantees**

Commission: 1% per annum

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IFU (continued)

| | | |
|---|---|---|
| 3. | NON-FINANCIAL SERVICES | Pre-investment studies: loans of up to 2 years to Danish firms to study project feasibility.<br><br>Project identification and monitoring. |
| 4. | COMMENTS | Management and training agreement required from technical partners. Financial grants possible for development and transfer of Danish technical/commercial know-how of very special character to companies in developing countries.<br><br>Funds not tied, not related to purchases of equipment in specific countries, including Denmark. |

DEVELOPMENT FINANCE CORPORATIONS

FRANCE

CAISSE CENTRALE DE COOPERATION ECONOMIQUE (CCCE)
8/10 Cite du Retiro,
35/37 rue Boissy d'Anglas,
F-75379 Paris Cedex 08

Telephone (1) 42 06 31 31
Telex: 212 632
Cable: CAISCOOP

Shareholders: French State (100%)

1. ELIGIBILITY CRITERIA

| | |
|---|---|
| Geographical coverage | Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo, Ivory Coast, Gabon, Guinea, Madagascar, Mali, Mauritania, Niger, Senegal, Togo, Zaire: Dominique, St. Lucia, St. Vincent & Grenadines Grenada, Guyana, Angola, Cape Verde, Equatorial Guinea, Gambia, Ghana, Guinea Bissau, Liberia, Mauritius, Mozambique, Sao Tome & Principe, Seychelles, Sierra Leone, Somalia: Algeria, Morocco, Tunisia: |
| Sector/sub-sector coverage | Priority is given to productive sector, with emphasis on agro-industry, agriculture and fishing, electricity and transport. Use of local raw materials. Favours projects with technology transfer. |
| Industrial partner | French technical partner |
| Other | Agreement of the host government is required Project must be financially and technically viable: Project must be in conformity with beneficiary country's development plan: Equipment supplies from France, Franc area or beneficiary country. |

2. FINANCING AVAILABLE

| | |
|---|---|
| Equity | Minority participation; temporary, Medium sized projects. |
| Loans | Currency: Lending in French francs; reimbursement in FF. |
| First window | - ordinary concessionary loans. Average 3 to 5% interest rate over 10 to 20 years, with 5-7 years grace. |
| | - loans with special condtions. 1.5% over 10 years, 2% afterwards: maximum 30 years with 10 years grace |

CCCE (continued)

| | | |
|---|---|---|
| | Second window | - floating market rate loans |
| | Investment limits | Variable, depending on project |
| 3. | NON-FINANCIAL SERVICES | - Project identification and preparation<br>- Occasionally, provisionof technical assistance<br>- Training in France of senior management staff of public and semi-public enterprises from eligible developing countries |
| 4. | COMMENTS | In most cases loans must be guaranteed by the beneficiary State. CCCE has recently been expanding direct lending to private sector, through either private banks or companies. It emphasizes its role in rehabilitation and restructuring of private and public sector enterprises.<br>For financing of private sector projects, PROPARCO, a whole subsidiary of CCCE, has been created in 1977 (see separate fact sheet). |

SOCIETE DE PROMOTION ET DE PARTICIPATION POUR LA COOPERATION ECONOMIQUE (PROPARCO),

5 Cite du Retiro,
35/37 rue Boissy d'Anglas,
F-75379 Paris Cedex 08

Telephone: (1) 42. 06.31.31
Telex: 212 632
Cable: CAISCOP

Shareholders: CCCE (100%)

1. ELIGIBILITY CRITERIA

| | |
|---|---|
| Geographical coverage | Benin, Burkina Faso, Burundi, Cameroon Central African Republic, Chad, Congo, Ivory Coast, Gabon, Guinea, Madagascar, Mali,Mauritania, Niger, Senegal, Togo, Zaire: Dominique, St. Lucia, St. Vincent & Grenadines, Grenada, Guyana, Angola, Cape Verde, Equatorial Guinea, Gambia, Ghana, Guinea Bissau, Liberia, Mauritius, Mozambique, Sao Tome & Principe, Seychelle Sierra Leone, Somalia: Algeria, Morocco, Tunisia: |
| Sector/sub-sector coverage | All productive sectors, but priority to export oriented sectors or sectors with high value added, mainly agro-industry, metal industry, services and hotels. |
| Industrial partner | French technical partner and French investor are generally required. |
| Other | Project must be feasible from an econoric point of view. Project must be in conformity with beneficiary country's general policy. |

2. FINANCING AVAILABLE

| | |
|---|---|
| Equity or Convertible Bond | Participation in medium-sized enterprises. Temporary and minority. |
| Loans | Loans are provided by the CCCE if necessary and can also be supported by PROPARCO (shareholders loans). |
| Investment limits | 5 to 20% of capital according to size of project, bu never more than FF 3 million. |
| Other | PROPARCO can facilitate access to CCCE financing as well as to other sources of financing from French and African commercial banks. |

PROPARCO (continued)

| | | |
|---|---|---|
| 3. | NON-FINANCIAL SERVICES | - improving feasibility studies<br>- analyzing and measuring the different project risks<br>- formulating sound and operational joint venture agreements. |

DEUTSCHE FINANZIERUNGSGESELLSCHAFT FUR BETEILIGUNGEN
IN ENTZICKLUNGSLANDERN Gmbh (DEG)
Belvederestrasse 40,
Postfach 45 03 40,
D - 5000 Koln 41
(Mungersdorf)

Telephone: (0221) 49 861
Telex: 8 881 949/8 883 470
Telefax: (0221) 49 86 290
Cable: DEUTSCHGES KOLN

Shareholders: Federal Republic of Germany (100%)

1. ELIGIBILITY CRITERIA

| | |
|---|---|
| Geographical coverage | All developing countries |
| Sector/sub-sector coverage | No restrictions. Public/private |
| Industrial partner | - German companies as technical and financial joint venture partners.<br>- Companies from other EEC countries if only way of implementing project. |
| Other | Technical partners should take significant equity participation, provide know-how, offer reliable technologies and competitive advantages supply qualified personnel and have adequate planning and supervision capacities. |

2. FINANCING AVAILABLE

Equity: Minority only. Generally, maximum 15 years; in due course, sale at the full asset value to nationals.

Loans: Currency: DM only

1. Basic Programme

Interest rates: adjusted to market rates for comparable loans, taking into account refinancing as well as foreign exchange provisions and tax incidence in the country of investment.

Maturity: up to 12 years with a grace period of up to 4 years, depending on sector/country.

Commitment fees: 1.5% per annum on the loan amount not disbursed.

Collateral:
- bank guarantee (local or regional bank)
- first mortgage on physical assets

DEG (continued)

| | |
|---|---|
| | 2. Programme for medium-sized enterprises (with turnover of German partner of up to DM 300 million)<br><br>Interest rates: basic DEG rates reduced by up to 1.5% per annum.<br><br>Maturity: up to 12 years with a grace period of up to 3 years.<br><br>Collateral: not needed.<br><br>3. Programme for promotion of handicraft and small industry (with a turnover of German partner of up to DM 10 million & up to 50 employees)<br><br>Interest rates: basic DEG rates reduced by at least 1.5% per annum.<br><br>Maturity: up to 12 years with a grace period of up to 3 years.<br><br>Investment limits: up to DM 300 000. Presence of local partner is not a condition. financial participation of industrial partner is not always necessary.<br><br>Collateral: not needed |
| Investment limits | General business guidelines. Generally minimum DM 300 000 |
| 3. COMMENTS | - Projects must contribute to country's economic development. |

DEVELOPMENT FINANCE CORPORATIONS

GERMANY

KREDITANSTALT FUR WIEDERAUFBAU (KfW)
Palmengartenstrasse 5-9,
Postfach 11 11 41,
D 6000 Frankfurt/Main 11

Telephone: (069) 7431-0
Telex: 41 13 52
Cable: KREDITANSTALT

Shareholders: Federal Government of Germany (80%)
Lander (Federal States) (20%)

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1. ELIGIBILITY CRITERIA (referring to loans/grants under capital aid)

| | |
|---|---|
| Geographical coverage | More than 90 developing countries have received capital aid. |
| Sector/sub-sector coverage | Emphasis is placed on: agriculture, economic and social infrastructure, industry. |

---

2. FINANCING AVAILABLE (referring to loans/grants under capital aid)

| | |
|---|---|
| Equity | No |
| Loans | Currency: Deutsche Mark (DM)<br>Interest Rates: for loans under capital aid: 0.75% to 4.5% |

Special Programmes:

1. Technology Programme: under this programme, small and medium-sized German companies are given loans on very favourable terms and conditions for the application of new technologies in joint ventures with partners in developing countries. New technologies means production processes and products which so far have not been introduced or manufactured in the developing country.

   Projects must contribute to development of country. Loans of up to 50% of financing of German companies.

   Amount: up to DM 2 500 000

   Interest rates: 1% p.a. during grace period: 2.5% following years.

   Maturity: up to 15 years with a 5 year grace.

   Collateral: security is not normally required for the loans.

KfW (continued)

| | |
|---|---|
| | Loan repayment: may be renounced under special circumstances.<br><br>For additional necessary investigations a preparatory loan with even more favourable conditions can be granted. |
| | 2. Subsidiary Programme (for the establishment and expansion of German enterprises in developing countries). Loans granted to small and medium German enterprises for<br>- direct investment in specific project<br>- financing of pre-investment studies<br><br>Amount: up to DM 2 500 000<br>Interest rates: 2.5% to 3.5%<br>Maturity: up to 15 years with 5 years grace.<br><br>Collateral: in principle, by pledge or mortgage: exceptionally other normal banking securities are accepted. |
| Non-reimbursable grants | (for Least Developed Countries) |
| Other | - As a rule contracts to be financed from capital aid are subject to public bidding. In order to ensure that the utilization of funds is consonant with the aims of German development policy the principles of international competition are adhered to. The Federal Government can decide that the supplies and services are tied to German firms.<br>- Application for capital aid must be submitted by the developing countries' governments to Federal government which transmits to KfW. |
| 3. NON-FINANCIAL SERVICES | Project-orientated manpower and technical assistance are made available. |

NETHERLANDS FINANCE COMPANY FOR DEVELOPING COUNTRIES (FMO) NETHERLANDS

Nassaulaan 25,
POB 85899,
8508 CN The Hague,
Netherlands

Telephone: (070) 61 42 01
Telex: 33042 nefmo nl

Shareholders: State of the Netherlands: 51%
140 private Dutch shareholders: 49%

---

1. ELIGIBILITY CRITERIA

| | |
|---|---|
| Geographical coverage | All developing countries (some countries may not be eligible for practical reasons or for reasons that have to do with the Dutch Government's policy on development and co-operation). |
| Sector/sub-sector coverage | All sector except purely trading activities or investments which are prirarily of an infrastructural nature. |
| Project sponsor | Preference is given to local sponsors with a good track record an making a significant financial commitment. |
| Industrial partner | Substantial interest in the investment. |
| Other | Project should be viable with high development value. |

---

2. FINANCING AVAILABLE

| | |
|---|---|
| Equity | Yes |
| Loans | Currency: Dutch guilders (Hfl)<br>Terms and conditions<br>Interest: rates must allow a suitable margin above the rate of interest FMO has to pay for funds raised on the capital market.<br>Maturity: normally 5 to 15 years<br>Collateral: adequate security needs to be provided<br>One-time upfront loan fee: 1.5% |

In exceptional circumstances, financial aid on concessionary terms can be made avaiable, i.e. loans on more favourable terms than those on the capital markets or subsidies for technical assistance can be provided for the purpose of ensuring know-how transfer, management assistance and training of local personnel.

FMO (continued)

| | |
|---|---|
| Investment limits | - Equity capital provided should preferably not exceed 25% of total equity<br>- Total financial interest: minimum Hfl 500 000 and more than 10% of total: maximum Hfl 10 to 20 million and less than 50% of total. |
| 3. NON-FINANCIAL SERVICES | - Feasibility studies: contribution of up to 50% of study costs is possible under certain conditions.<br>- FMO can assist projects in identifying management staff. |
| 4. COMMENTS | - No obligation to spend funds provided in the Netherlands<br>- Loans and equity participation only as supplementary financing to normal sources of investment or loan capital.<br>- Shares paid up in local currency: grants either in Dutch guilders or local currency. |

DEVELOPMENT FINANCE CORPORATIONS

UNITED KINGDOM

COMMONWEALTH DEVELOPMENT CORPORATION (CDC)

33 Hill Street,
London W1A 3AR
United Kingdom

Telephone: (1) 629 84 84
Telex: 21431 - 25849
Telefax: (1) 493 80 27

Statute U.K. Statutory Corporation

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1. ELIGIBILITY CRITERIA

| | |
|---|---|
| Geographical coverage | British dependent territories and, with Ministerial approval, any Commonwealth or developing country. Eligible non-Commonwealth countries including Cameroon, Ethiopia, Cote d'Ivoire, Liberia, Rwanda, Sudan and Zaire. |
| Sector/sub-sector coverage | - Primary production and processing. Renewable natural resources - agriculture, aquaculture, ranching, forestry and minerals together with allied processing plants.<br>- Basic development. Generation of power, water supply and transport.<br>- Industry Factories, industrial and port development, hotels.<br>- Finance companies. Development finance corpanies, mortgage finance compnaies, leasing companies, agricultural credit organisations.<br>Preference is also given to projects which generate foreign exchange, encourage savings and assist credit formation, create local job opportunities, foster management capability and spread technical knowledge, contribute to greater income equality inside the developing countries. |
| Industrial partner | No specific requirements but CDC is particularly interested in participating in projects with British companies. |

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2. FINANCING AVAILABLE

| | |
|---|---|
| Equity | Yes |
| Loans | Currency: mainly pound sterling<br>Terms and conditions:<br>Interest rates: equal to, or lower than, World Bank/IFC rates<br>Maturity: 7 to 20 years |

CDC (continued)

| | |
|---|---|
| | Collateral: charge on project assets<br><br>Guarantee commission<br><br>Commitment fees: depends on draw-down schedule |
| Investment limits | Minimum: usually £ 1 million but can be as low as £ 250 000 for private sector projects. |
| Other | Funds are not normally tied but projects are required to ensure that British suppliers are treated on equal opportunity basis. |
| 3. NON-FINANCIAL SERVICES | CDC may undertake corporate management in the initial project stages in certain areas, especially large-scale agricultural estates, financial development institutions and building societies. |

PRIVATE FINANCE INSTITUTIONS

INVESTMENT COMPANIES

AFRICA

EDESA S.A. (Economic Development for Equatorial and Southern Africa)

Kreuzstrasse 26,
P.O. box 490,
8034 Zurich, Switzerland

Telephone: (01) 252 18 95
Telex: 813.315
Telefax: (01) 252.47.75
Cable: EDESA

Shareholders: About 25 banks and industrial groups

1. ELIGIBILITY CRITERIA

| | |
|---|---|
| Geographical coverage | Independent developing countries and adjacent islands south of the Sahara and north of South Africa. |
| Sector/sub-sector coverage | Priority is given to productive sectors, no other restrictions. |

2. FINANCING AVAILABLE

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|---|---|
| Equity | Minority share participation. |
| Loans | Currencies: usually USD, DM, SFR, £ or local currencies in specific cases.<br>Interest: commercial rates<br>Maturity: medium and long term<br>Collateral: loans must be secured by government or local banks<br>Commitment fee: payable on undrawn portion of the loan (on average 1%) |
| Syndications | EDESA can organize complementary financing for a specific project. |
| Investment limits | Generally, maximum USD 1 million |

3. COMMENTS

Government's agreement is required.
Loans not tied to supply of equipment from any specific country.

SIFIDA INVESTMENT COMPANY (Societe Internationale Financiere pour les Investissements et le Developpement en Afrique)

8c, Avenue de Champel,
P.O. Box 396,
CH 1211 Geneva 12
Switzerland

Telephone: (022) 47 60 00
Telex: 422.047
Telefax: (022) 46.21.61
Cable SIFIDA

Shareholders: 130 major banks and industrial groups: African Development Bank, International Finance Corporation

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1. ELIGIBILITY CRITERIA

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| Geographical coverage | All independent African developing countries; |
| Sector/sub-sector coverage | Priority is given to productive sectors, especially in agro-industry, manufacturing, tourism, export oriented projects, using local raw materials. Preference to private sector, but public sector not excluded for viable projects. |
| Industrial partner | Industrial partner is expected to take meaningful cash equity share in the project and have a proven record of successful management of similar ventures. |

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2. FINANCING AVAILABLE

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| Equity | Minority share participation to supplement loan financing in selected cases. Termination of participation: in due course, participation is expected to be sold to nationals of host country at mutually acceptable terms. |
| Loans | Currencies: usually USD, DM, FF or ECU; other currencies possible.<br>- Medium or long-term loans<br>Interest rates: either fixed for entire duration of the loan or floating, reviewed every 6 months. Calculated by reference to London inter-bank offered rate (LIBOR). Margin variable depending on project and country risk (usually between 1 and 3%).<br>Duration: 5 to 10 years. Will depend upon cash-flow needs and include a grace period of 1 to 3 years. |

SIFIDA (continued)

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|---|---|---|
| | | Repayment: usually in equal semi-annual instalments.<br><br>Collateral: depending on nature of project and sponsors, loan must be secured either by prime bank or any other acceptable entity, by government or on the company's assets. (external retention accounts, for instance).<br><br>Commitment fee: payable on undrawn portion of the loan (on average 1%)<br><br>- Short-term loans:<br><br>Up to 5 years, also available. Floating interest basis as above.<br>Collateral by prime bank or government guarantee. |
| | Syndications | SIFIDA can organize complementary financing for a specific project, using the financial resources of its shareholder banks. Conditions are normally based upon those of the international euro-currency market for the country concerned. |
| | Investment limits | Maximum 10% of SIFIDA's shareholders' funds (about USD 2.2 million per project): not to exceed 50% of total cost of any one project. Balance of loan requirements can be raised by SIFIDA in cooperation with its shareholders.<br><br>Minimum: SIFIDA's total investment usually not below USD 300 000 to 500 000 per project. |
| | Other | Barter, forfaiting, leasing, prefinancing of exports, can be considered. |
| 3. | NON-FINANCIAL SERVICES | Full range of pre-investment, project feasibility and evaluation consultancy services available through SIFIDA Advisory Unit at agreed terms. |
| 4. | COMMENTS | a) SIFIDA usually attends board meetings as director (equity) or observer (loans).<br><br>b) Participation subject to obtaining the relevant protection status under respective investment codes.<br><br>c) Funds not tied, not related to purchases of equipment in any specific countries. |